Reviewer’s report

Title: Improving question formulation for use in evidence appraisal in a tertiary care setting: a randomised controlled trial

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Reviewer: Dr P Gorman

Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Accept after revision, which I do not need to see

When assessing the work please consider the following issues:

Does the work have serious flaws that should preclude publication?
NO

Are the results adequate to support the conclusions drawn?
YES

Issues to consider:
1. Are the conclusions drawn adequately supported by the data shown:
if not, what are the shortcomings and could they be overcome?
Yes, I believe they are. The study is well designed, commendable for the transparency of the methods, including an explicit statement of power and sample size calculation, use of nonparametric tests where appropriate, reporting of interrater agreement corrected for chance, blinded assessment of outcome, etc.
I'm not a statistician, but it seems to me that pre- and post-intervention comparisons of the sort performed warrant the use of a statistical test for paired samples.
One potential confound, the possibility that participants in the comparison groups might be in contact (working in the same facility, for example) and thereby contaminate one another with respect to the intervention, would if anything tend to diminish the difference found. A second concern is that clinicians from diverse disciplines are combined as if it can be assumed that their information needs are the same - I'm not sure that this is true.
A third concern is that although the difference found was unlikely to have occurred by chance, the actual difference in the ordinal variable reported is not very large, so it's not clear to me that the difference in adherence to the "well formulated question"
doctrine would translate into a significant difference in more important outcomes. I personally have faith in this doctrine, that well formulated questions will lead to more evidence based practice, but as far as I know it remains unproven. The authors acknowledge a more important limitation, that differences in information management by clinicians may or may not translate into improvements in patient outcomes. I look forward to seeing the study they are conducting to examine this question.

2. Are sufficient details provided to allow replication of the work or comparison with related analyses: if not, what is missing? YES

3. Does the manuscript adhere to the relevant standards for reporting and data deposition: if not, in what ways? YES

4. Is the writing acceptable? (nb. Since we do not charge for access to published research, we cannot undertake the costs of editing poorly written papers. If you tell us that the writing is not acceptable for publication, we will ask the authors to find someone, or an editing service, to help them rewrite it. If you tell us that the paper is too poorly written for it to be peer reviewed, we will ask them to rewrite it now.) YES. Except that I found Table 5 very difficult to read. There ought to be a way to construct this table so that it more clearly displays the data and the relevant differences between the groups.

**Competing interests:**

None declared.